Serial Number: 10:701,140
Filing Date: November 4, 2003
Title: APPARATUS FOR IMPROVING STENCIL/SCREEN PRINT QUALITY

IN THE CLAIMS

Please amend the claims as follows.

- 1. (Previously Presented) A stencil comprising:
 - a stencil pattern having at least one stencilling opening formed therein:
- a first coating applied to one surface of the stencil pattern and one or more side surfaces of the stencilling openings and having a surface tension greater than the surface tension of the stencil pattern; and
- a second coating applied to the opposite surface of the stencil pattern and having a surface tension less than the surface tension of the stencil pattern.
- 2. (Original) The stencil of claim 1, wherein the stencil pattern is stainless steel.
- (Original) The stencil of claim 1, wherein the first coating is selected from the group comprising tungsten, tungsten carbide, tungsten nitride, nickel and nickel alloys.
- 4. (Original) The stencil of claim 1, wherein the second coating is a polymeric material.
- 5. (Previously Presented) A process for manufacturing a stencil for assisting in the application of a printable material comprising:

forming a stencil pattern from a sheet of material impervious to the printable material and forming at least one stencilling opening therein;

coating a top surface of the stencil pattern with a first coating having a surface tension greater than the surface tension of the stencil pattern;

coating one or more side surfaces of the stencilling openings with the first coating having a surface tension greater than the surface tension of the stencil pattern; and

coating the bottom surface of the stencil pattern with a second coating having a surface tension less than the surface tension of the stencil pattern.

Title: APPARATUS FOR IMPROVING STENCIL/SCREEN PRINT QUALITY

- 6. (Previously Presented) The process of claim 5, further comprising spreading a printable material onto the top surface of the stencil, wherein the spreading of the printable material includes using a dockering tool to assist in spreading the printable material across the top surface of the stencil pattern and through the stencilling openings.
- 7. (Canceled)
- (Previously Presented) The stencil of claim 1, wherein the stencilling opening corresponds to an adhesive pattern for an integrated circuit die.
- (Previously Presented) The stencil of claim 1, wherein the second coating includes polytetrafloroethylene.
- 10. (Previously Presented) The stencil of claim 1, wherein the second coating includes a surface tension at least one order of magnitude less than surface tension of a metal.
- 11. (Previously Presented) The stencil of claim 1, wherein the second coating is to control a running property of an adhesive.
- 12. (Previously Presented) The stencil of claim 11, wherein the stenciling opening receives the adhesive.
- 13. (Previously Presented) The stencil of claim 1, wherein the first coating includes tungsten.
- 14. (Previously Presented) The stencil of claim 13, wherein the first coating includes a nitride of tungsten.
- 15. (Previously Presented) The stencil of claim 1, wherein the surface tension of the stencil pattern includes a surface tension of 1384 dyne/cm at melting point.

Filing Date: November 4, 2003

APPARATUS FOR IMPROVING STENCIL/SCREEN PRINT QUALITY

- 16. (Currently Amended) The stencil of claim 1, wherein at least one of the first coating and the second coating includes means for controlling a running are configured to control a running property of an adhesive applied onto the coated stencil.
- (Previously Presented) A stencil comprising:

a metal stencil pattern including at least one stencilling opening formed therein, the stencil pattern includes a surface tension;

a first coating applied to one surface of the stencil pattern and one or more side surfaces of the stencilling openings, the first coating is selected from the group comprising tungsten, tungsten carbide, tungsten nitride, nickel and nickel alloys, the first coating includes a surface tension greater than the surface tension of the stencil pattern; and

a polymeric second coating applied to the opposite surface of the stencil pattern and having a surface tension less than the surface tension of the stencil pattern.

- 18. (Previously Presented) The stencil of claim 17, wherein the second coating includes polytetrafloroethylene.
- 19. (Previously Presented) The stencil of claim 17, wherein the second coating includes a surface tension at least one order of magnitude less than surface tension of a metal.
- 20. (Previously Presented) The stencil of claim 17, wherein the first coating includes tungsten.
- 21. (Previously Presented) The stencil of claim 17, wherein the stencil pattern includes stainless steel.